

Clear Skies Don't Stop State's Cloud Scientists

By Michael McNutt
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BLACKWELL — This spring's drought is not deterring cloud researchers in north-central Oklahoma.

Two airplanes, one flying thousands of feet over the other, are being used to collect information helpful in predicting global climate change.

The experiments are similar to ones conducted last fall from the Blackwell-Tonkawa Municipal Airport.

The scientists, many of whom work with the U.S. Energy Department's cloud research station near Lamont, are learning flexibility when dealing with Oklahoma's weather, especially the dry weather and mostly clear skies.

This spring's flights include experiments for clear skies as well as for overcast conditions, said Will Bolton, deputy technical director of the Energy Department's Atmospheric Radiation Measurement Unmanned Aerospace Program.

"This time out, we have a range of experiments

that are planned that can take advantage of clear skies and the overcast skies or these fairly substantial high altitude clouds," Bolton said.

"I think we have a set of experiments that can take advantage of probably any of the conditions we're likely to encounter this spring."

The missions are expected to continue through May 10, Bolton said.

Another mission is planned this fall using manned planes and newer unmanned airplanes that can reach altitudes of 65,000 feet, he said.

The experiments are part of work at the U.S. Southern Great Plains Cloud and Radiation Test Site, the first in the world.

A fiber-optic telephone line connects operations at the Blackwell airport to the Lamont site, which went into operation in 1992. Scientists at the center and the airport can look at the data for immediate analysis.

The climate research station gathers data in an area that covers about 55,000 square miles in north-central

Oklahoma and south-central Kansas.

Scientists are using an airport hangar and a converted 40-foot trailer, each equipped with high-speed computers, to record data collected by the aircraft instruments.

A single-engine Egrett, originally built for the German government as a high-altitude reconnaissance plane, flies at 43,000 feet above a Twin Otter passenger plane at 15,000-20,000 feet.

The instruments are designed to collect data on the invisible and infrared light absorbed, reflected or transmitted through cloud layers.

Pilots fly parallel as often as possible.

At the end of each mission, pilots fly at the same altitude to check if the instruments are accurate.

Airborne measurements of the atmosphere are being taken over northern Oklahoma and south-central Kansas.

Scientists are concentrating on energy passing through the atmosphere that cannot be collected from the ground.